

Active and Assisted Living Programme. ICT for ageing well.

Requirements meet solutions

How to successfully transfer stakeholder needs in AAL projects

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<http://aalforum2015.tech-experience.at>



Introduction

Brief introduction of organizers & speakers



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Introduction

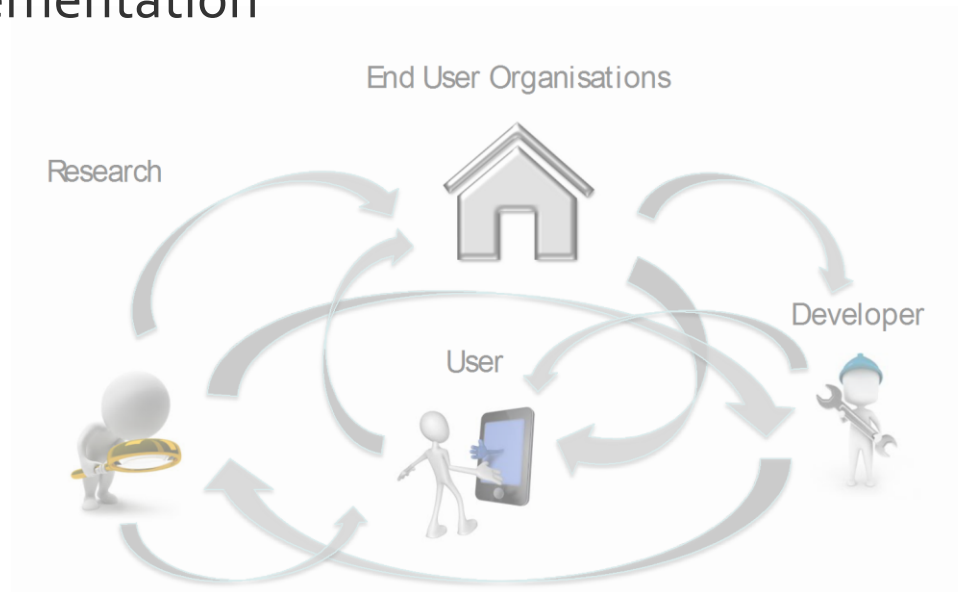
Outline:

- Introduction to the topic – goals and procedure
- Key note presentations
- Interactive group discussion
- Summary – possible strategies for successful communication
- Outlook

Introduction

Major challenge:

- Ensure successful communication of user requirements
 - in multidisciplinary project teams
 - using a variety of different methods
 - facing failures regarding communication and implementation



Introduction

Major questions

- How to deal with multidisciplinary in project teams?
- What are useful methods for communicating user requirements?
- How to ensure the implementation of user requirements in the development process?
- What can we learn from failures regarding the communication and implementation of user requirements?

Lex van Velsen

DEALING WITH MULTIDISCIPLINARY TEAMS

Multidisciplinary

“A multidisciplinary approach involves drawing appropriately from multiple disciplines to redefine problems outside of normal boundaries and reach solutions based on a new understanding of complex situations.”

(Wikipedia, 2015)

Multidisciplinary

Can be a blessing for the design of AAL products and services and can lead to:

- Innovative results
- Close alignment to usage context and working protocols

Or it can be a source of:

- Frustration
- Misunderstandings

What's happening?

There is a language gap.

Can be solved by using:

- Personas
- Scenarios
- Workflow diagrams
- Prototyping

What's happening?

There are different expectations.

Can be solved by:

- Defining tasks and roles as early as possible
- Explaining how each stakeholder goes about in solving a problem/designing something new

What's happening?

There are different interests among the members of a design team.

Can be solved by working on both a novel service or product and business model.

Questions for discussion

- What problems did you experience when working in multidisciplinary teams?
- Which strategies or methods did you apply to solve these problems?
- Let's try to work together to a set of advices for project managers dealing with a multidisciplinary team.

Mona Marill

USEFUL METHODS FOR COMMUNICATING USER REQUIREMENTS

Introduction

User requirements definition process

Gathering user requirements

Communicating the defined user requirements

Implementation of the requirements in the project

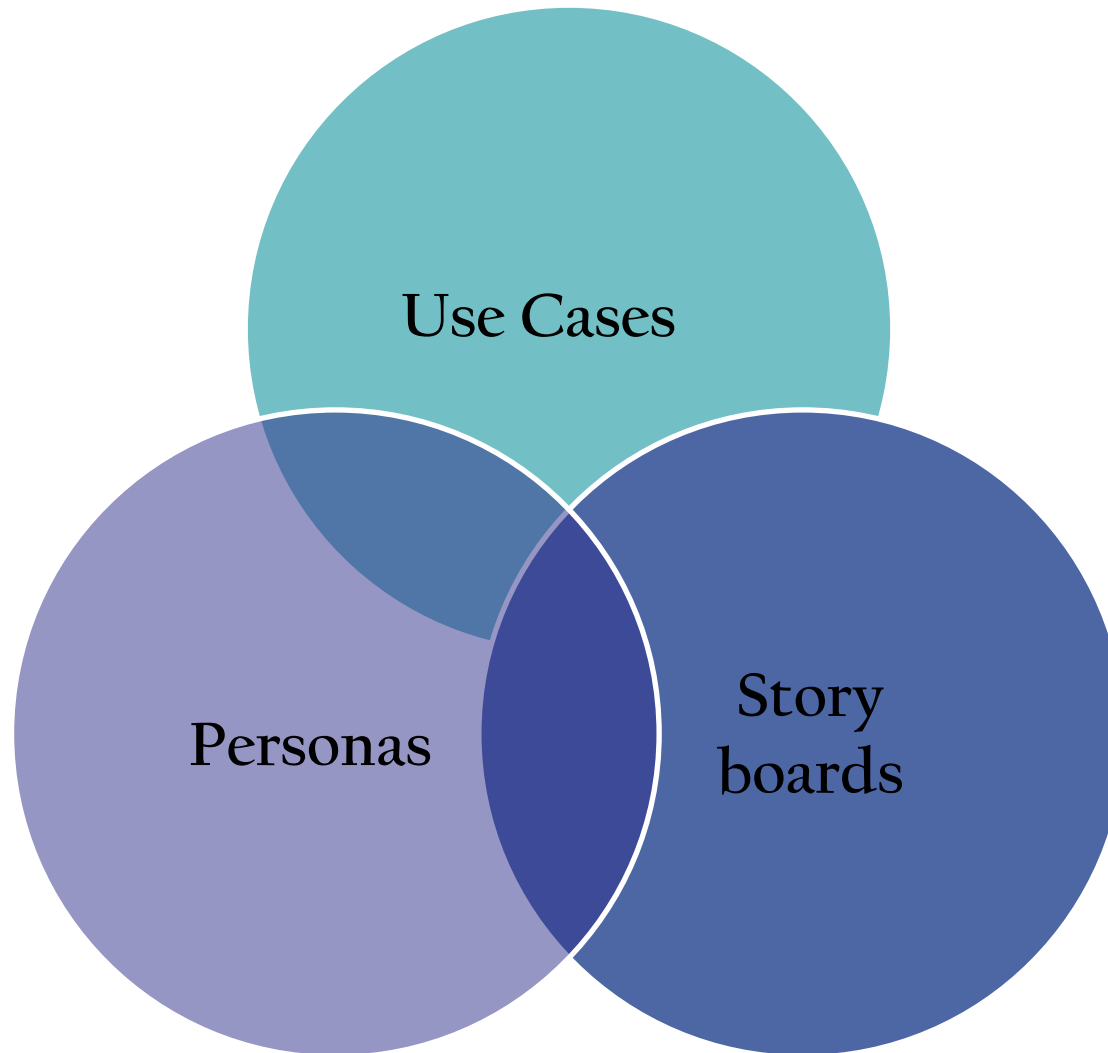
Introduction

Stakeholders directly involved in the process



⇒ Efficient communication tools help the work progress and make sure that the users requirements are taken into consideration in the development process

Overview of the useful tools and methods



Personas Definition

WHAT IS A PERSONA?

- a profile of archetypical end-users including **age, gender, state of health, attitudes** etc.
- **raises empathy** and deepens **understanding** of their drives and motivations.

HOW PERSONAS ARE CREATED AND USED IN A PROJECT?

- Selection of **the most interesting target groups**
- **Collection of information** from the selected target groups
- Creation of a **persona card** for each selected sub group

Personas Example

Olivia the Older Person					
<p>Idealist ex-hippie</p> <p>Age: 64</p> <p>  Family & Home  Social contacts  Income </p> <p> Cognitive: <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Memory: <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Diseases: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Symptoms: <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> Limitations: <input checked="" type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> </p>					
<p>About & Family</p> <p>Olivia is a very active and socially engaged person who loves life. She studied at the university and then worked as a social worker. Olivia and her husband Carl have two children who live in the same city. They often meet up or at least talk on the phone a couple of times a week. She has a good pension and has enough money to live without worries about the future.</p>	<p>Limitations/Difficulties in:</p> <p>None</p>				
<p>Health</p> <p>Olivia has rheumatism and pain in her back, knees and joints. She takes drugs for joint support and for keeping her blood pressure under control, but she does not have any limitations in her daily life because of her diseases. Her weight is normal and she eats healthy.</p>	<table border="1"> <thead> <tr> <th>Diseases</th> <th>Symptoms</th> </tr> </thead> <tbody> <tr> <td>Arthritis/rheumatism High blood pressure</td> <td>Pain in joints</td> </tr> </tbody> </table>	Diseases	Symptoms	Arthritis/rheumatism High blood pressure	Pain in joints
Diseases	Symptoms				
Arthritis/rheumatism High blood pressure	Pain in joints				
<p>Social</p> <p>Almost every week, Olivia takes care of her grandson for a day. She loves playing with him. She is an activist and does a lot of voluntary work in various organizations. She likes cultural events and going out with her husband and friends. Her schedule is always full and she needs to keep a calendar for all of the events she attends. She goes swimming every week and takes long walks with her dogs. She goes skiing</p>	<table border="1"> <thead> <tr> <th>Psychographics</th> <th>Drugs</th> </tr> </thead> <tbody> <tr> <td>Happy, Positive, Active, Curious, Open minded, Satisfied</td> <td>Yes Hearing Good Eyesight Glasses Risks None</td> </tr> </tbody> </table>	Psychographics	Drugs	Happy, Positive, Active, Curious, Open minded, Satisfied	Yes Hearing Good Eyesight Glasses Risks None
Psychographics	Drugs				
Happy, Positive, Active, Curious, Open minded, Satisfied	Yes Hearing Good Eyesight Glasses Risks None				

- A Persona from the ALFRED project
- Creation of several personas from the primary and secondary user groups

Use Case Definition

WHAT IS A USE CASE?

- A short **written scenario**: how a persona **could use the developed system** the system's interaction with the user
- Explain **how the system should behave**

HOW USE CASES ARE CREATED AND USED IN A PROJECT?

- **Use requirements** gathered to write a story
- Brainstorming among the end-user partners to **write the story** based on the requirements and including **the user(s)** (i.e. persona), **the trigger**, and **the main scenario**

Use Case Example

From the ALFRED project

Use Case ID:	2.3
Use Case name:	Informal Care Coordination
Personas:	Olivia the Older Person and Carl the Informal Carer
<p>Every morning ALFRED asks Olivia the Older Person how she is feeling. If ALFRED learns that Olivia does not feel well, it informs Carl about this. This is very useful for Carl who cannot be with his wife all the time even though she has health issues.</p> <p>ALFRED also indicates to Olivia when she has to take her medicine and Olivia confirms this to ALFRED as soon as she has taken it. Carl can check this by asking ALFRED if Olivia took her medicine. This way, Carl does not have to annoy Olivia by asking her, and he feels more at ease.</p> <p>Thanks to ALFRED, when Carl is not at home, communication between Carl and Olivia is now easier: they can send little messages with ALFRED.</p> <p>Because Carl is busy with work and taking care of Olivia, he uses ALFRED to remind him about things that he should do at home. During her days, Olivia enjoys cooking and with ALFRED she can even discover healthier recipes, as eating well is an essential part of wellbeing.</p> <p>In urgent situations, Olivia can ask ALFRED for help. ALFRED then checks on which of her carers are close by and calls them to check up on Olivia. This is also a great relief for Carl, who has been feeling much less stressed lately.</p>	

Story Board Definition

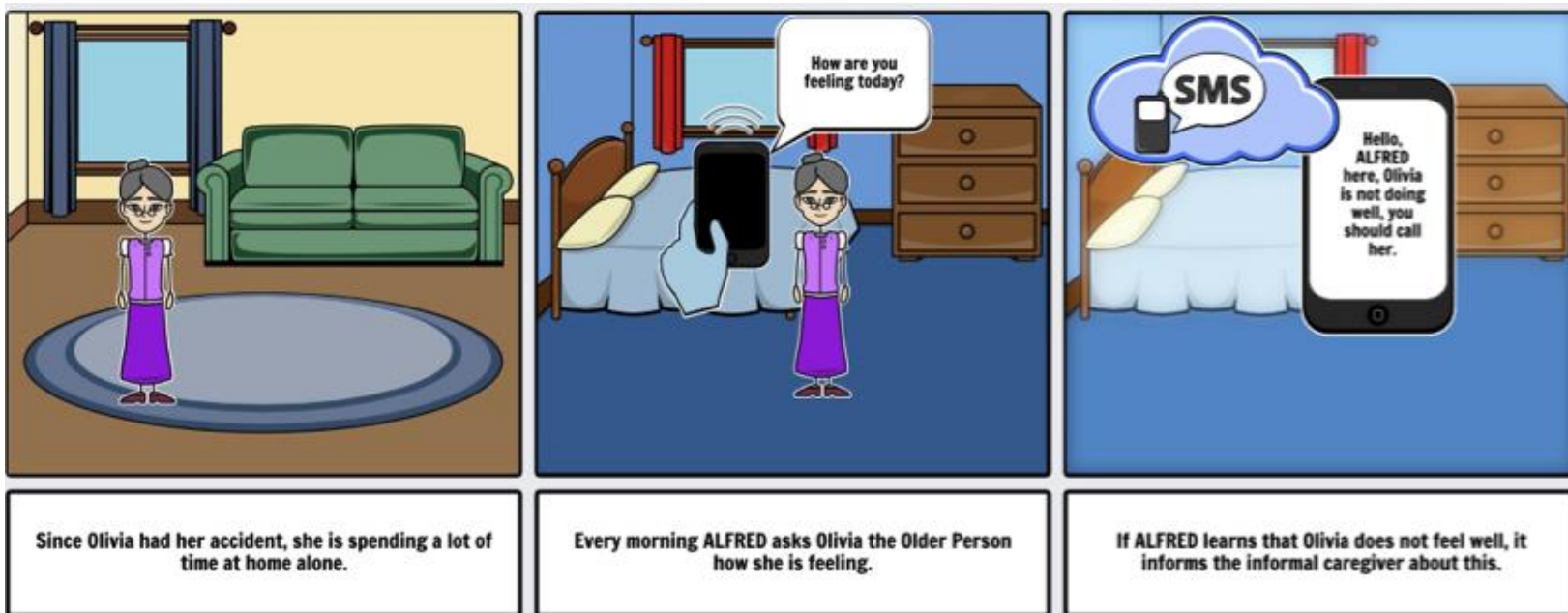
WHAT IS A STORY BOARD?

- **Cartoons illustrating the selected functionalities** of the developed system
- **Visualizes the use scenario** for all stakeholders

HOW STORY BOARDS ARE CREATED AND USED IN A PROJECT?

- Definition of the target group, the desired functionalities and how the solution is effective
- Creation of drawings/ photos on a story board illustrating the interaction between the user and the system

Story Board Example



Questions for discussion

- What kind of different methods to communicate requirements have you already applied?
- What are your experiences regarding the methods you applied? (strengths and pitfalls)

Katja Neureiter

ENSURING THE IMPLEMENTATION OF REQUIREMENTS IN THE DEVELOPMENT PROCESS

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From practice to design or vice versa?



Understand (social)
practices

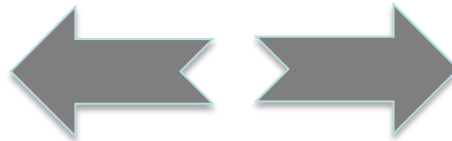


Design for (social)
practices

From practice to design or vice versa?



Understand (social)
practices



“Design
Implications”



Design for (social)
practices

The bad news

- There are no rules or methods that actually ensure a successful translation from requirements to design
- Transfer processes are complex
 - Requirements are not always “tangible”
 - Example: “trust”
 - Researchers, Designers & Developers speak “different languages”
 - Example: “wording design”
 - Etc.

The good news

- The complexity of the process leaves space for creativity and alternative approaches, methods, etc.



Suggestions from practice

- Understand (social) practices through and in design
- Apply participatory design approaches
- Taking decisions and have always two possible solutions available

Questions for discussion

- How do you usually proceed to make sure that the requirements are successfully transferred into design?
- What are the biggest challenges or pitfalls you faced within this process?

Christiane Moser

FAILURES AND LESSONS LEARNED FROM THE REQUIREMENTS ANALYSIS AND DEVELOPMENT PROCESS

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Lessons Learned

Success vs. Failures

- Most of the time we only speak and report about the success stories and what worked out
- We hardly share our experiences on failure and lessons learned from what did not work out



Space to Learn from Failures

- The best way to learn from each other is to think critically about the own experiences and share them with others!

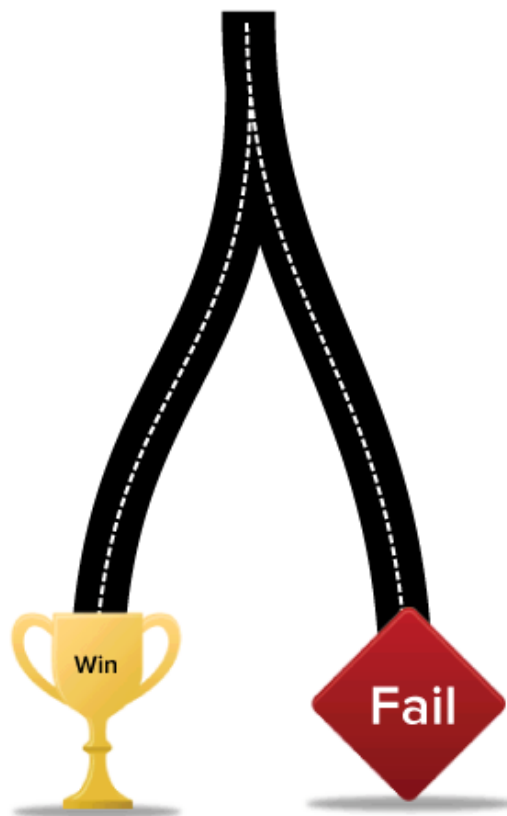
Failure is Success,
if we learn from it!

William Edwards

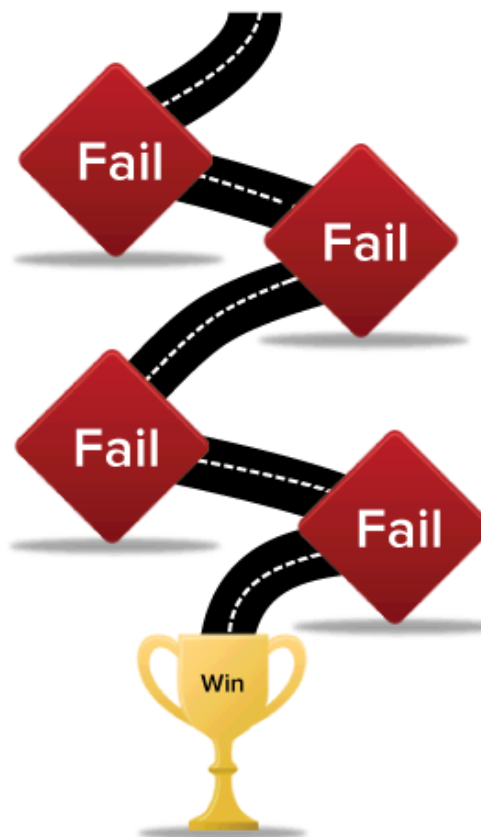


Learn from ...

What Most People Think



What Successful People Know



Questions for discussion

- Where did you fail in the requirements assessment, communication, implementation?
- What are your lessons learned from the failures?

Interactive group discussion

Topic 1 – Dealing with multidisciplinary teams

What problems did you experience when working in multidisciplinary teams?

Which strategies or methods did you apply to solve these problems?

Topic 2 – Methods for communicating user requirements

What kind of different methods to communicate requirements have you already applied?

What are your experiences regarding the methods you applied?

Topic 3 – Implementing requirements

How do you usually proceed to make sure that the requirements are successfully transferred into design?

What are the biggest challenges or pitfalls you faced within this process?

Topic 4 – Failures and lessons learned

Where did you fail in the requirements assessment, communication, implementation?

What are your lessons learned from the failures?

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